

ABSTRACT

A three-terminal organic electro-luminescent (EL) device is disclosed for achieving increased efficiency, decreased turn-on voltage, and increased brightness. The three-terminal organic EL device has a first electrode formed on a substrate, at least one organic material layer including an organic light-emitting layer formed on the first electrode, a second electrode formed on the organic material layer; and at least one third electrode formed on or inside said organic material layer. The third electrode is formed outside of a region, which is between the first electrode and the second electrode to prevent a reduction of luminescent area. The luminance of the organic EL device is controlled by adjusting potential of the third electrode with respect to the potentials of the first electrode and the second electrode.